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| 09/750,144      | 12/29/2000  | Steve Lewontin       | 730.39161X00        | 6775             |

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| EXAMINER |
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NGUYEN BA, PAUL H

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| ART UNIT | PAPER NUMBER |
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2176

DATE MAILED: 10/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/750,144

Applicant(s)

LEWONTIN, STEVE

Examiner

Paul Nguyen-Ba

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Notice to Applicant*

1. This action is responsive to Applicant's Amendment filed on 7/27/2005.
2. Claims 1-21 are currently pending. Claims 1 and 10 are independent claims.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 5, 7, 10-13, 15, 17, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simon Hunt et al. ("Simon Hunt"), U.S. Patent Application Publication No. 2004/0049737, U.S. Patent No. 6,567,815, in view of Amano et al. ("Amano"), U.S. Patent No. 6,003,033.

**Independent Claims 1, 10 and Claims 2, 3, 11-13**

Simon Hunt discloses a method of representing a document written in a markup language and on a mobile terminal adapted to receive said document and render said document on said display (see Abstract), the method comprising:

- *providing a virtual node tree describing the structure of the data types, with each one of the nodes in the virtual node tree respectively corresponding to one element of a specific data type in the document (see Fig. 2 and [0085]-[0090], [0140], [0146]-[0151] et seq. → DOM tree);*
  - *for each one of the nodes in the virtual node tree, providing a data array including information identifying the relationship of the node to other nodes in the virtual node tree and a reference indicating the location of data corresponding to the node (see [0016], [0152]); and*
  - *obtaining, by a set of software components in the mobile terminal, the data corresponding to the nodes using the reference included in the data array (see [0016], [0149] → Based on the nodes of the object tree, the QDOM generates an array of primitive data types for efficiently developing an optimized standard structure)*
  - *wherein the data in the document is stored in a document block in memory (see [0146] and [0289]).*
  - *wherein the document is written in XML or a variation of XML ([0014], [0050]).*
- Simon Hunt does not explicitly disclose:

*...providing a virtual node tree describing the structure of the data types in the document but not containing actual document data, ....*

However, Amano discloses:

*...providing a virtual node tree describing the structure of the data types in the document but not containing actual document data, ... (see Fig. 5; col. 5 lines 50-59 et seq. → i.e. Tree Skeleton), and additionally, also discloses:*

*for each one of the nodes in the virtual node tree, providing a data array including information identifying the relationship of the node to other nodes in the virtual node tree and a reference indicating the location of data corresponding to the node (see col. 10 lines 29-40 et seq.; Fig. 18).*

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Since Simon Hunt and Amano (hereinafter “Simon Hunt-Amano”) are both from the same field of endeavor, the motivational purpose and advantage of describing a tree easily and generating a data structure corresponding to the tree in memory with the resultant description disclosed by Amano (see col. 13 lines 1-6) would have been recognized in the pertinent art of Simon Hunt. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teaching of Simon Hunt with the teachings of Amano to include a virtual node tree, not containing actual document data.

#### **Claims 5, 7, 15, 17**

Simon Hunt-Amano further discloses an array indicating whether a node is a sibling or child (see [0149], [280]), but does not specifically teach indicating whether or not the node is the last sibling in a list of siblings and does not specifically teach a child index and a sibling index in the data array.

However, it was commonly known to those of ordinary skill in the art and would have been obvious at the time the invention was made to a person having ordinary skill in the art that the position of a node can be calculated by its arrangement in the data array respective to its siblings for the purpose of indicating whether or not the node is the last sibling in a list of siblings. It was also commonly known to those of ordinary skill in the art and would have been obvious at the time the invention was made to a person having ordinary skill in the art that a child and sibling index can be created using data arrays to further clarify the hierarchical standing of particular nodes.

**Claims 20 and 21**

Simon Hunt-Amano discloses storing data arrays in the memory of the mobile phone/terminal (see para [0016] and [0150]).

5. Claims 4, 6, 8, 9, 14, 16, 18, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simon Hunt et al. ("Simon Hunt"), U.S. Patent Application Publication No. 2004/0049737, in view of Amano et al. ("Amano"), U.S. Patent No. 6,003,033, in further view of Call, U.S. Patent Application Publication No. 2002/0143521.

**Claims 4 and 14**

Simon Hunt-Amano discloses the method with respect to independent claims 1 and 10 above, but does not specifically disclose data arrays including a flags field.

However, Call discloses the use of flags to uniquely identify a selected rule in a manner tailored to the needs of the portion of the XML document (see Call [0362]) for the purpose of signaling a particular condition or status.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teaching of Simon Hunt-Amano with the teachings of Call to include the use of flag fields to uniquely identify a selected rule in a manner tailored to the needs of the portion of the XML document (see Call [0362]) for the purpose of signaling a particular condition or status.

**Claims 6 and 16**

Simon Hunt-Amano does not specifically disclose the method wherein a flag in the flags field and identifies the type of the node data. However, Call discloses that the header information for each node identifies the data type of the node (see Call [0368]; see also Figure 6).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teaching of Simon Hunt-Amano with the teachings of Call to include the use of flag fields to uniquely identify the data type of the node for the purpose of signaling a particular condition or status of the data.

**Claims 8, 9, 18, 19**

Simon Hunt-Amano discloses the method and mobile phone with respect to independent claims 1 and 10 as discussed above, but does not specifically teach whether the data arrays have a fixed or variable length.

However, it was commonly known to those of ordinary skill in the art and would have been obvious at the time the invention was made to a person having ordinary skill in the art that data arrays can be either fixed or variable for the purpose of holding a preset or expanding number of objects. Furthermore, Call discloses fixed and variable length data as an addressable array to provide efficient data manipulation functions typically performed by hierarchical object oriented data systems, including systems conforming to the Document Object Model widely used for storing and manipulating XML and HTML character data (see Call [0016] and [0017]) for the purpose of compact data representation to preserve storage space (see Call [0013]).

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It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teaching of Simon Hunt-Amano with the teachings of Call to include the representation of a document structure written in a markup language, wherein the data arrays have a fixed or variable length for the purpose of compact data representation to preserve storage space.

### ***Response to Arguments***

6. Applicant's outstanding arguments with respect to claims filed on 7/27/2005 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,



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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Nguyen-Ba whose telephone number is (571) 272-4094.

The examiner can normally be reached on 11 am - 7 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on (571) 272-4136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PNB

*William L. Bashore*  
WILLIAM BASHORE  
PRIMARY EXAMINER  
10/12/2005